

Biological Stream Assessment at Federal-Provincial Water Quality Stations in the Georgia Basin

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Keywords: Benthic invertebrates, water quality, CABIN, biomonitoring

Environment Canada and British Columbia Ministry of Water Land and Air Protection collaboratively maintain several water quality stations where chemical measurements are taken every two weeks to detect trends. In 2003, Environment Canada incorporated an annual biomonitoring component to stations in the Georgia Basin using the Canadian Aquatic Biomonitoring Network (CABIN) program. Benthic invertebrates are used in the CABIN program to assess the health of a stream by comparing expected invertebrate assemblages with observed assemblages. Expected assemblages are determined based on established relationships between the invertebrate community and the physical environment. At most stations, the biological stream assessments were correlated with the water quality. In a few cases, the biological data indicated a different stream condition than the water quality data, possibly identifying a biological problem where existing water quality guidelines are not exceeded. The next step is to incorporate the biological information with the water quality information into the Canadian Water Quality Index.